

In Reply: Trough Melatonin Levels Have No Physiological or Clinical Relevance

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We thank the author(s) of the Letter to Editor for providing valuable comments to our recent study which compared trough melatonin levels in plasma among elderly people with various severities of cognitive deficits [1].

For the first comment, we have listed the sampling time between 8–12 AM as a limitation in our paper [1], while another study has limited the subject selection to those with specimens collected during a similar time period between 7–11 AM [2].

The second comment is about the high melatonin level in our study. While the reference range of melatonin in peripheral blood has been previously reported to be up to 80.4 pg/ml at 8 AM in healthy adults [3], we have discussed our result and provided possible reasons [1]. Briefly, potential confounders such as global variation in sunshine duration may have contributed to the finding [1].

The third comment relates to our assay method and its result. We used a human melatonin ELISA kit (MBS704506, <https://www.mybiosource.com/human-eli-sa-kits/melatonin-mt/704506>), which has high sensitivity and excellent specificity for detection of human melatonin. However, we agreed with the comment that the possibility of interference was unable to be excluded. We have also regarded the assay using ELISA rather than HPLC as another limitation in our paper [1].

In summary, our study, albeit with several limitations, has been the first one aiming to compare the melatonin

levels in different phases of cognitive aging [1]. Further studies are warranted to specifically and feasibly measure melatonin and, if necessary, other related compounds such as its precursors or metabolites, and elucidate their roles in different phases of Alzheimer's disease.

■ Conflicts of Interest

No potential conflict of interest relevant to this article was reported.

■ Author Contributions

Conceptualization, writing of original draft, review & editing: Chieh-Hsin Lin, Hsien-Yuan Lane.

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